BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of the Milwaukee Water Works
for Authority to Increase Water Rates — Docket 3720-WR-108

DIRECT TESTIMONY OF PEIFFER BRANDT
ON BEHALF OF MILWAUKEE WATER WORKS

Q. Please state your name and business address.

A. My name is Peiffer Brandt. My business address is 1031 S. Caldwell Street, Suite #100, Charlotte, NC 28203.

Q. What is your educational and professional background?

A. I graduated with a Bachelor of Science in Chemical Engineering from Princeton University in 1994 and a Master of Science in Public Health from the University of North Carolina at Chapel Hill in 1997.

I joined Raftelis Financial Consultants, Inc. (Raftelis) in September 1997 and have been with Raftelis continuously since then. Raftelis specializes in providing financial and management consulting for water and wastewater utilities throughout the United States. I started as a consultant and have been promoted at various times, reaching Chief Operating Officer in 2009, which is my current position with the firm. I have conducted numerous cost of service and rate studies for water utilities across the country during my 16 plus years with Raftelis. I have provided, as Ex.-MWW-Brandt-1, a copy of my curriculum vitae which demonstrates my extensive experience in assisting many utilities with cost of service studies, financial planning studies, and other rate related consulting.

Q. Do you have any professional affiliations?

A. Yes, I am a member of the Association of Metropolitan Water Agencies, American Water Works Association (AWWA), and the Water Environment Federation. I am a former Chair of the North Carolina AWWA-Water Environment Association, and I have reviewed articles on water rate issues for publication in the Journal AWWA.

Q. Has Milwaukee Water Works (MWW) authorized you to provide testimony on their behalf?

A. Yes, it has.

Q. What are your responsibilities with regard to this rate case proceeding?

A. I am leading Raftelis' effort to assist MWW in submitting a rate case to the Public Service Commission of Wisconsin (PSC) in order to help MWW achieve an appropriate level of rate increases that will allow MWW to operate self-sufficiently in both the short- and long-term.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide an overview of the test year revenue requirement requested by MWW in its rate increase application and an overview of the rate design filed by MWW as part of its rate increase application.

Q. Are you sponsoring any exhibits with your testimony?

A. Yes. Based on my overall responsibility for the filing, I am sponsoring Ex.-MWW-Brandt-2 (PSC REF#: 205543), which is MWW's Revised Revenue Requirements Application, filed on ERF on May 30, 2014 and Ex.-MWW-Brandt-3 (PSC REF#: 205540), which is MWW's revised Rate Design, filed on ERF on May 30, 2014.

REVENUE REQUIREMENTS

Q. Did you prepare the revised Revenue Requirements Application dated May 30, 2014, Ex.-MWW-Brandt-2?

A. I have been involved throughout the development of the Revised Revenue Requirements Application dated May 30, 2014. Ms. Elaine Conti, a Manager at RFC, prepared the bulk of the Revised Revenue Requirements Application, under my guidance. Ms. Conti is unable to provide testimony due to being on maternity leave.

Q. What revenue increase is MWW seeking in this rate increase application?

A. MWW seeks PSC authorization to earn total revenues of approximately $94.9 million. This reflects a revenue increase of approximately $9.3 million over the revenues produced by MWW's currently effective rates, or 11.3%, as shown in Attachment 14 of the Revised Revenue Requirements Application.

Q. What rate of return was used in achieving an increase of 11.3%?

A. A composite rate of return of 5.38% on utility financed plant is necessary to achieve MWW's requested revenue increase, as shown in Attachment 14 of the Revised Revenue Requirements Application dated May 30, 2014.

Q. What test year has MWW selected for this rate increase application?

A. MWW filed its Revised Revenue Requirements Application with the PSC on May 30, 2014. Therefore, in keeping with PSC requirements, MWW's rate increase application is based on the use of a 2014 test year.

Q. Has MWW made any significant changes in the methodology used to calculate its forecast 2014 revenue requirement compared to previous rate increase filings?

A. There are no major methodological differences. MWW calculated its forecast 2014 revenue requirement in the same general manner as the test year revenue requirement associated with MWW's last full water rate case (Docket No. 3720-WR-107), which was initiated in September 2009 with a test year of 2010 (2009-11 Rate Case) and had the Final Decision for this rate issued on February 3, 2011 (PSC REF# 144469).

Q. What volume of billed retail water consumption is forecast for the 2014 test year?

A. Forecast test year retail customer billed water consumption is approximately 31.0 million hundred cubic feet (Ccf), as shown in Attachment 3 of the Revised Revenue Requirements Application. This reflects a 5.5% reduction over actual 2012 retail customer billed water consumption of 32.8 million Ccf.

Q. What volume of billed wholesale water consumption is forecast for the 2014 test year?

A. Forecast test year wholesale customer billed water consumption is approximately 10.1 million Ccf as shown in Attachment 3A of the Revised Revenue Requirements Application. This forecast reflects approximately a 10% reduction from actual 2012 wholesale customer billed water consumption of 11.2 million Ccf.

Q. Describe the methodology used to develop the forecast of 2014 test year retail customer billed water consumption.

A. We started with actual usage amounts for each tier and customer class for the 12 months ending May 31, 2013. We then applied an adjustment factor to each usage level based on historical consumption patterns, as well as certain factors such as price elasticity, population growth, and macroeconomic factors. We then made additional adjustments to specific tiers and customer classes in order to comply with any suggested adjustments

that were made by PSC staff in the Corrected Staff Revenue Requirements Exhibit for Docket 3720-WR-108, Ex.-MWW-Brandt 4 (PSC REF#: 203844).

Q. Describe the methodology used to develop the forecast of 2014 test year wholesale customer billed water consumption.

A. We started with actual usage for each wholesale customer for the 12 months ending May 31, 2013. We then applied an adjustment factor to each wholesale customer's water use based on historical consumption patterns, as well as certain factors such as price elasticity, population growth, and macroeconomic factors. We then made additional adjustments to comply with any suggested adjustments that were made by PSC staff in the Corrected Staff Revenue Requirements Exhibit.

Q. How did you calculate water sales revenues for the test year?

A. We applied the current MWW rates for meter charges, volumetric charges, and fire protection charges plus the anticipated 3% simplified rate case increase to the projected water use estimates for the test year and the current number of customers by meter size.

Q. What level of water sales (both fixed and volumetric) revenue is forecast for the 2014 test year for retail customers, wholesale customers, and fire protection services?

A. Test year retail customer volumetric water sales revenue using forecast water consumption is approximately $64.2 million as shown in Attachment 7 of the Revised Revenue Requirements Application. Test year wholesale customer volumetric water sales revenue using forecast water consumption is approximately $10.0 million as shown in Attachment 7 of the Revised Revenue Requirements Application. Test year fire

protection charges is approximately $7.5 million as shown in Attachment 7 of the Revised Revenue Requirements Application.

Q. Explain how you projected other operating revenues for the test year.

A. Other operating revenues were projected by analyzing historical annual increases for each line item.

Q. What was the total operating revenues that you determined for the test year (the sum of all revenues)?

A. We determined total operating revenues for test year 2014 in the amount of approximately $85.6 million as shown in Attachments 7 and 14 of the Revised Revenue Requirements Application.

Q. What are the total operations and maintenance expenditures forecast for the test year?

A. As shown in Attachment 10AB of the Revised Revenue Requirements Application, the total test year operations and maintenance (O&M) are forecast to be approximately $49.0 million. This forecast is approximately equal to the average annual O&M expenses for FY 2010 through FY 2012.

Q. Describe the methodology used to estimate the O&M expenditures included in the 2014 test year revenue requirement.

A. O&M expenses were first based on the historical 3-year average of actual O&M expenses for FY 2010 through FY 2012. To determine FY 2013 O&M expenses, we applied an escalation factor of 1.5% to labor costs and 1% for non-labor expenses. To determine test year 2014 O&M expenses, we applied an escalation factor of 1% for both labor and non-labor expenses. Several O&M expenses were not escalated by these factors but were

adjusted to comply with the O&M adjustments suggested by PSC staff in the Corrected Staff Revenue Requirements Exhibit, Ex.-MWW-Brandt-4. In addition, the O&M costs associated with power were escalated by 3% which is the increase stated by the power company. The final result of this process is the forecast of test year O&M expenditures shown in Attachment 10AB of the Revenue Requirements Application.

Q. Describe the key drivers of these O&M expenditure increases.

A. The key drivers of the O&M expenditures and adjustments are described in Attachment 19 of the Revised Revenue Requirements Application.

Q. What level of depreciation expense is included in the forecast 2014 test year revenue requirement?

A. As shown in Attachment 14 of the Revenue Requirements Application, the test year depreciation expense is forecast to be approximately $14.1 million.

Q. Describe the methodology used to estimate the depreciation expense forecast for the 2014 test year.

A. The depreciation expense is derived based on the forecast 2014 test year average balance in each utility plant account multiplied by the PSC depreciation rates authorized for use by MWW. The average balance includes any depreciation anticipated as a result of additions or retirements to plant assets.

Q. Were any modifications to 2014 test year depreciation expense made for known and measurable adjustments that deviate from MWW historical norms?

A. No.

Q. What property tax equivalent payment is included in the forecast 2014 test year revenue requirement?

A. The forecast test year tax equivalent payment is approximately $12.3 million. The total taxes, which also includes Social Security Taxes and PSC Remainder Assessment Tax, is approximately $13.7 million. The derivation of the taxes is shown in Attachment 8 of the Revised Revenue Requirements Application.

Q. Is the forecast 2014 test year property tax equivalent payment in compliance with Wisconsin Administrative Code § PSC 109.02?

A. Yes. The test year tax equivalent payment is calculated by multiplying the Assessed Plant Value by the Local & Schools Mill Rate. This approach is consistent with PSC 109.02.

Q. What is the sum of all of the operating expenses (O&M costs, depreciation and taxes) estimated for the test year?

A. The total operating expenses for the test year are approximately $76.8 million as shown in Attachment 14 of the Revised Revenue Requirement Application.

Q. What net operating income is derived for the test year once the total operating expenses are subtracted from the total operating revenues?

A. The net income for the test year is approximately $8.8 million as shown in Attachment 14 of the Revised Revenue Requirement Application.

Q. What is the average net investment rate base (NIRB) that you calculated for the test year?

A. As shown in Attachment 14 of the Revised Revenue Requirement Application, the average net investment rate base for the test year is approximately $336.1 million.

Q. What composite rate of return on NIRB is MWW requesting in its 2014 revenue requirement?

A. The composite rate of return on NIRB requested by MWW is 5.38%.

Q. What are the retail and wholesale components of MWW's requested composite rate of return?

A. The retail component of the composite overall rate of return is 5.25%. The wholesale component is 6.25%. The conceptual basis for this differential is discussed in Mr. Wright's direct testimony.

Q. What revenues are derived by applying the composite rate of return to the NIRB for the test year?

A. When applied to test year NIRB, this yields revenues of approximately $18.1 million as shown in Attachment 14 of the Revised Revenue Requirements Application.

Q. How do the derived revenues from the return on NIRB for the test year relate to the increase requested?

A. As shown in Attachment 14 of the Revised Revenue Requirements Application, the revenues from the return applied to the NIRB of $18.0 million are subtracted by the net income of $8.8 million, resulting in a rate increase of approximately $9.3 million for the test year.

Q. What is the funding source for capital improvements?

A. MWW anticipates funding its five-year capital improvement plan through cash revenues as opposed to issuing debt. There are two primary reasons for this funding strategy. First, the capital improvement plan consists almost exclusively of rehabilitation and replacement projects. The capital improvement plan includes approximately $20 million to $25 million of annual funding over the next five years beginning in 2015, with over two-thirds being for main replacement. This level of capital improvement will continue

in perpetuity unless new technology leads to the development of assets with longer service lives, as the current capital improvement plan is consistent with a system life of approximately 100 years.

In other words, this level of capital improvement is only rehabilitating or replacing 1% of the system annually. Since this level of rehabilitation and replacement is going to be ongoing every year for the foreseeable future, MWW believes it is most appropriate to fund these capital improvements through cash as opposed to through debt. As a practical matter, the main replacement program is essentially for renewal of existing capacity, as opposed to providing for new capacity.

Secondly, the reality of MWW's revenues make cash financing the preferred alternative for funding main replacement and other asset refurbishment. MWW's revenues are largely driven by water consumption. Water consumption declined approximately 8% between 2009 and 2013, and this trend is not abating. Reliance on debt for renewal of existing capacity will grow increasingly impractical as borrowing costs will add to cash flow needs concurrent with the decline in the utility's "revenue base."

MWW is not adverse to using debt to fund large capital projects or growth-related projects, which will be one-time costs and should be amortized over a 20 year period through the use of debt. However, using debt to fund annual rehabilitation and replacement projects is not a sustainable practice and could limit the ability of MWW to issue debt in future years for large, one-time projects that could become necessary.

Q. Please summarize MWW's proposed 2014 test year revenue requirement.

A. As summarized in Attachment 14 of the Revised Revenue Requirements Application, the test year revenue requirements result in a required revenue increase of approximately $9.3 million which represents an increase of approximately 11.4%.

Q. Were the revenue requirements for the test year reviewed in detail by the PSC?

A. Yes. During the review, PSC staff asked clarifying questions to assist with the review of the revenue requirements. Ultimately, PSC staff identified a number of modifications to the revenue requirements for the test year.

Q. Do the revenue requirement for the test year reflect any adjustments suggested by the PSC?

A. Yes, the revenue requirements reflect the adjustments suggested by PSC staff in the Corrected Staff Revenue Requirements Exhibit, Ex.-MWW-Brandt-4.

Q. Does this conclude your testimony regarding Revenue Requirements at this time?

A. Yes.

RATE DESIGN

Q. Are there any proposed modifications to the rate structures?

A. The wholesale rate structures are not changed nor are the West Milwaukee rate structures. The rate structures for urban retail and suburban retail customers have been modified. The first change was to separate residential and non-residential customers and to propose a uniform volumetric rate for residential customers. Almost all residential customers already faced a uniform volumetric rate structure because the current rate structure includes 100 Ccf of usage per quarter in the first block. Further supporting this modification is the fact that the recommended max day demand factor for the residential class was the same as the commercial class and the max hour demand factor was actually lower for the residential class based on the customer demand study. The second change was to reduce the number of blocks for the non-residential customers from four to three. This modification was accomplished by combining the first two blocks into a single block. Therefore, the first block cutoff is now 5,000 Ccf, with the second block being the next 15,000 Ccf, and the third block being all usage over 20,000 Ccf.

Q. Why does West Milwaukee have different rates and charges as compared to other suburban retail customers?

A. West Milwaukee is unique in that it owns and maintains its own distribution system and does not utilize the City's distribution system. Therefore, the cost of serving West Milwaukee does not include an allocation of distribution related costs. West Milwaukee customers are charged the same fixed charges as the suburban customers to recognize that the customers are not within the City of Milwaukee, yet utilize City meters and billing, and should pay a small surcharge.

Q. Why did West Milwaukee retain its existing rate structure?

A. Once the appropriate costs are allocated to West Milwaukee, MWW is indifferent to how West Milwaukee would like to recover its cost of service through its rates as long as the rate structure can be handled by the billing system. MWW asked West Milwaukee if it would like to maintain its current rate structure or modify its rate structure to be consistent with the new urban retail rate structure. West Milwaukee indicated that it would prefer to retain the current rate structure.

Q. How were the fixed charges calculated?

A. The fixed charges consist of three components: 1) billing; 2) meter; and 3) service. For each component, the cost of service was identified. The cost was then divided by the number of equivalent meter units for each component. For the billing component, the number of equivalent meter units is the number of meters because the size of the meter does not impact the cost of providing billing services. For the meter component, the number of equivalent meter units is determined by multiplying the number of meters at each meter size by the meter ratio. For example, a 5/8-inch meter is multiplied by 1.0, while an 8-inch meter is multiplied by 80.0. For the service component, the number of equivalent meter units is determined by multiplying the number of meters at each meter size by the service ratio. For example, a 5/8-inch meter is multiplied by 1.0, while an 8-inch meter is multiplied by 7.0. The charge for each meter size was calculated by adding the three components. For a 5/8-inch meter this translates to the following equation: billing component + 1.0*meter component + 1.0*service component. For an 8-inch meter, this translates to the following equation: billing component + 80.0* meter

component + 7.0*service component. The different meter and service ratios are included in Schedule 10 – Meters in the Revised Cost of Service Study, Ex.-MWW-Wright-2.

Q. Are the meter and service ratios consistent with the ratios used in the 2009-11 Rate Case?

A. Yes. We utilized the same ratios.

Q. Were the fixed charges set at the calculated rate or at the greater of the calculated rate and the current rate?

A. The fixed charges proposed are the calculated charges even if the calculated charges are lower than the charges currently in place. It is often the practice to set the fixed charges at the greater of 1) the calculated charge; and 2) the existing charge so that customers don't see a decrease in the fixed charges when other charges are increasing. MWW decided to not follow this protocol and to set the proposed fixed charges at the calculated charge regardless of whether it was lower than the current fixed charge for that meter size. The reason was MWW felt this better represented the cost of service as opposed to a hybrid of cost of service and historic practices. For larger meters (1.5 inches and greater), the calculated charges were less than the existing charges, so customers with large meters benefitted from this decision by MWW.

Q. Is it your opinion that the fixed charges are appropriate?

A. The fixed charges are calculated in a manner that is consistent with the American Water Works Manual M-1 and that is employed by utilities across the country. Therefore, the methodology for calculating the charges is reasonable. We believe Milwaukee Water Works would benefit from additional fixed charge revenue to mitigate the impact of declines in per capita consumption. However, such an increase would have the greatest

impact on low use residential customers and would negatively impact the affordability of MWW's rates. The balance between fixed revenue recovery and affordability is reasonable. For these reasons, we believe the fixed charges are appropriate.

Q. How were public fire charges calculated?

A. The retail public fire charges were calculated by taking the Retail Cost of Public Fire Service and dividing by the number of equivalent meters. The number of equivalent meters is the sum of urban residential equivalent meters and suburban equivalent meters, with the suburban equivalent meters being multiplied by 1.25 to account for the mandated surcharge.

Q. How were the wholesale volumetric rates calculated?

A. Once the fixed charges were calculated, it was possible to determine the revenues from fixed charges. The public fire protection charges were also calculated and used as an offset to determine the revenues to be recovered from the volumetric charges for each wholesale customer. This net revenue was divided by the test year billable flows. The rate per Ccf was then rounded to the nearest penny.

Q. How was the urban residential volumetric rate calculated?

A. The total cost to serve urban residential customers was determined as part of the cost of service analysis. The revenue from the fixed fee was then calculated and offset to get a net revenue requirement for the volumetric charge. This net revenue requirement was then divided by the number of billable units for the test year to get the uniform volumetric rate for urban residential customers.

Q. How were the urban non-residential volumetric rates calculated?

A. As with the urban residential customers, the total cost to serve commercial, industrial, and public authority customers was determined as part of the cost of service analysis. The cost to serve each of these three customer classes was aggregated for the urban non-residential class. The fixed fee revenue was calculated for the non-residential customers and used as an offset to arrive at net revenue requirements to recover from the volumetric rates. Due to a number of factors in the cost of service and the catch up from the previous rate case, the non-residential customers were receiving larger impacts than the residential customers. Therefore, the net revenue requirements were further offset by the revenue derived from the 25% surcharge applied to the suburban retail fixed and volumetric charges and the West Milwaukee fixed charges. At this point, we had the net revenue requirements to be recovered from volumetric charges. Since we modified the rate structure it was not possible to simply increase each block rate by the same percentage to recover the necessary revenue. Instead, we took the average of the current block 1 and block 2 rates and assumed it was the starting point for the new block 1 rate. We then assumed the current block 3 rate was the starting point for the new block 2 rate and the current block 4 rate was the starting point for the new block 3 rate. We then determined the necessary across the board increase to the starting point for each block to recover the necessary revenue. This percentage was applied to each starting point and the rate was rounded to the nearest penny.

Q. Are the urban non-residential rates appropriate?

A. There are infinite combinations of block rates that could be calculated to arrive at the revenue associated with the cost of serving the non-residential customers. There is not a single optimal block rate structure. Different structures would result in varying customer

impacts depending on billable consumption. I believe the rates are appropriate balancing customer impacts and recovery by classes of non-residential customers. As such, the rates are appropriate.

Q. How were the suburban retail rates and charges calculated?

A. The suburban rates and charges are calculated by multiplying the urban rates and charges by 1.25 and rounding to the nearest penny. The 1.25 multiplier is required by Wis. Stat. s. 62.69(2)(h).

Q. How were the West Milwaukee rates and charges calculated?

A. The West Milwaukee fixed fees are the same as the suburban retail fixed fees. The West Milwaukee volumetric rates were calculated by taking the revenue requirements from the cost of service and determining the across the board increase to the current rates necessary to generate this level of revenue given the forecast billable consumption. It was possible to just calculate an across the board volumetric increase because there is no proposed modification to the West Milwaukee rate structure. The calculated increase was 2.5%.

Q. Has any tempering to reduce overall revenue recovery been incorporated into the rate design?

A. We did consider incorporating tempering and have a spreadsheet within the model that would allow for tempering. However, there has been no tempering to reduce overall revenue recovery. The model is set up so that the tempering would reduce fire protection costs because these costs are seeing larger percentage increases.

Q. Has there been any tempering within retail or wholesale rate design.

A. The suburban fixed charges and volumetric rates and the West Milwaukee fixed charges are set at 1.25 times the urban retail charges and rates. As a result, there is recovery of additional revenue from the suburban retail customers. The current rate design allocates this additional revenue as an offset to non-residential retail revenue requirements. The non-residential customers' rates are going to increase at a higher percentage because of the new peaking factors. MWW felt it appropriate to mitigate some of this additional increase by applying the offset solely to non-residential revenue requirements.

Q. Does this conclude your testimony regarding Rate Design at this time?

A. Yes, it does.